

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ2004/000129

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: A01C 7/20.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI IPC A01B 49/-, A01C 5/-, 7/- and KEYWORDS disc, disk, coulter, wheel, concave, convex, dish, curve, hub, bearing, mount, secure, locate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	AU 53681/86 (586463) B1 (PYNARI NOMINEES PTY. LTD) 13 July 1989 Whole document	1 to 13
Y	DE 3324464 A1 (GEBR. CLEMENS KG) 17 July 1985 Figure 1	1 to 13
Y	EP 0546974 B1 (ETABLISSEMENTS MAUGUIN SA) 20 March 1996 Figure 1a	1, 2, 6 to 11, 13
Y	WO 1991/005458 (EVERS RESEARCH B.V.) 2 May 1991 Whole document	3, 4, 11 to 13



Further documents are listed in the continuation of Box C



See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"E" earlier application or patent but published on or after the international filing date

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"O" document referring to an oral disclosure, use, exhibition or other means

"&" document member of the same patent family

"P" document published prior to the international filing date but later than the priority date claimed

Date of the actual completion of the international search
18 October 2004Date of mailing of the international search report
25 OCT 2004

Name and mailing address of the ISA/AU

AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaustalia.gov.au
Facsimile No. (02) 6285 3929

Authorized officer

COLIN FITZGIBBON

Telephone No : (02) 6283 2226

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
See additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Claims 1 to 13

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No: III

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Claims 1 and 2 are directed to, as part of a seeder, a seed deposition assembly comprising a disc having some degree of concavity, a hub or bearing attached to the disc primarily from the side with some degree of concavity and at least one of (v) a disc mount attached to the other side of the disc, (vi) a swinging arm to allow raising and lowering of the disc, (vii) a moulding defining a seed deposition chute and (viii) a disc mount on the other side of the disc being carried by a swinging arm. Claims 3 and 4 are directed to a seed sowing assembly comprising a disc having an inside and an outside, a hub or bearing mounted from the inside, a chute member attached to the bearing from the outside of the disc, (a) the chute defining an inlet to receive seeds above an outlet and/or (b) a journal-able seed inlet. Claim 12 is directed to a seed or driller to deposit serial streams of seed, the discs characterised by its bearing mounted from the inside (ie the side having concavity) and the chute attached to the bearing from the outside of the disc. It is considered that the moulding defining a seed deposition chute comprises a first "special technical feature".
2. Claim 14 is directed to a bank of trailing arms, each arm carrying a disc having some degree of concavity, a hub or bearing located within the concavity of the disc and a mount from its swinging arm for the bearing at least primarily from the other side of the disc. Claim 18 is directed to a seed drill having two rows or arrays, multiple seed deposition assemblies, wherein each seed deposition assembly includes a concave disc, a bearing mounted to the disc on or from the concave side and a mount into the bearing from the other disc side. It is considered that the mount into the bearing from the other disc side comprises a second special technical feature.

These groups are not so linked as to form a single general inventive concept, that is, they do not have any common inventive features, which define a contribution over the prior art. The common concept linking together these groups of claims is that they define a disc with some degree of concavity with a hub or bearing attached to the disc on the side with the concavity. However this concept is not novel in the light of DE 33 24 464 A1 (Clemens), WO 1991/05458 A1 (Evers Research B.V.) and SU 1639439 A1 (Voron Forestry Institute). Therefore these claims lack unity a posteriori.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report			Patent Family Member				
AU	53681/86	NONE					
DE	3324464	NONE					
EP	0546974	CA	2083355	FR	2684516	US	5531171
WO	1991/005458	AU	66340/90	AU	87500/91	CA	2067749
		CA	2094236	EP	0428198	EP	0481538
		NL	8902596	US	5259460	US	5458203
		WO	1992/006580				
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.							
END OF ANNEX							